ABSTRACT OF THE DISCLOSURE

Filter cartridges may have a core element formed of a non-filtering, self-supporting non-woven mass of indefinite length continuous synthetic polymeric core fibers, and at least one annular filtration zone layer formed of a mass of non-woven indefinite length continuous synthetic polymeric filtration fibers. The non-woven core element is most preferably formed in situ during filter cartridge manufacturing by melt-blowing synthetic polymeric core fiber streams toward a forming mandrel. The non-woven core element is completely solidified prior to the filtration zone fibers being melt-blown thereon so that the core and filtration fibers are predominantly mechanically interlocked with one another, instead of being melt-bonded thereto. Filter cartridges of predetermined length may be cut from an upstream filter cartridge preform of indefinite length by subjecting the preform to forced cooling air to thereby minimize (if not eliminate entirely) significant filter cartridge shrinkage over time. In addition, a cutter assembly may be mounted laterally of the preform, but is capable of rate-synchronized longitudinal movement with the preform during its cutting operation.